

Paper to the 7th



7 prejudices and the responses from the paper industry

1

The prejudice:

Paper production devastates valuable forestlands



Wood is an indispensable raw material for paper manufacture. Some 20 percent of the global wood harvest goes into this sector of production. However, the paper industry is far from sawing off the branch it is sitting on. It takes a vital interest in a sustainable utilisation of wood resources to safeguard their availability to future generations. To this end, paper manufacturers engage in a sustainable raw material management which ensures that three to four new trees are planted in place of every single tree that has been felled. Over the years, all weaker developed trees are sorted out in regular thinning operations. In the overall perspective, this leaves a plus balance.

The Food and Agriculture Organization (FAO) calculates the forest augmentation in the northern hemisphere at an annual 5 percent. According to a study, woodlands in Europe have expanded over the past 20 years, thus being capable of absorbing higher rates of carbon dioxide.

1

The facts:

The paper industry does not destroy any woodlands – let alone tropical rainforests. It actively supports sustainable forest management.



In Germany, forests have been utilised in a sustainable way since over 200 years. Also countries like Russia or Canada with their large virgin forest resources are regularly harvesting no more than a fraction of the yearly forest growth. The concept of sustainability encompasses economic, ecological and social aspects. Today's forest management uses woodlands as a raw material source without jeopardising their biosphere function. Accordingly, forest management strategies vary from one location to another.

By comparison, the situation is more critical in the southern hemisphere of our planet. As FAO studies have revealed, the ongoing destruction of native forests is attributable to an uncontrolled development of farmland and grassland, the illegal harvesting of tropical wood for the building industry or the clear-cutting of forests and re-planting of food and energy crops such as oil palms or soy. In countries like Brazil we find large-scale eucalyptus plantations for the pulp industry. These were, however, raised on former agricultural areas that had lost the productivity required for their original crops.

The paper industry proactively assists the certification of a sustainable forest management. The certificates are issued by independent auditors on the basis of specific checklists of criteria, thus enabling verification by both clients and consumers. From the paper industry's viewpoint, it is especially the 'Programme for the Endorsement of Forest Certification Schemes' (PEFC) and the 'Forest Stewardship Council' (FSC) system which meet all requirements on effective and traceable certification. Besides, there exist a substantial number of forests with a long-standing tradition of sustainable management which have, however, never been certified.

The entire European paper industry – including German manufacturers – has consistently been committed to combating the illegal felling of trees and adheres strictly to the rules of the European Timber Trade Regulation EUTR which prohibits its imports of wood and wood pulp from illegal logging.

2 The prejudice:

Paper production entails excessive energy consumption.



The paper industry – just like every industrial production – needs energy to operate its machinery and for sheet drying. However, the European paper industry meanwhile derives 54 percent of its energy consumption from regenerative sources.¹⁾

For reasons of economy and ecology, paper industrialists are continuously working towards an optimisation of their processes. In a targeted approach, they have been able to reduce the specific energy demand per ton of paper by 27 percent since 1990.²⁾

Since the mid-60s, energy consumption per ton of paper has decreased to one third of its original level. The paper industry today expends 21 million kWh for paper and board products manufactured in Germany. Production of the average annual per capita consumption in EU countries – approx. 200 kg paper – necessitates an energy input of 560 kWh.

2

The facts:

The paper industry has drastically reduced its energy demand over the past decades. Moreover, it derives a substantial part of the required energy from renewable sources.

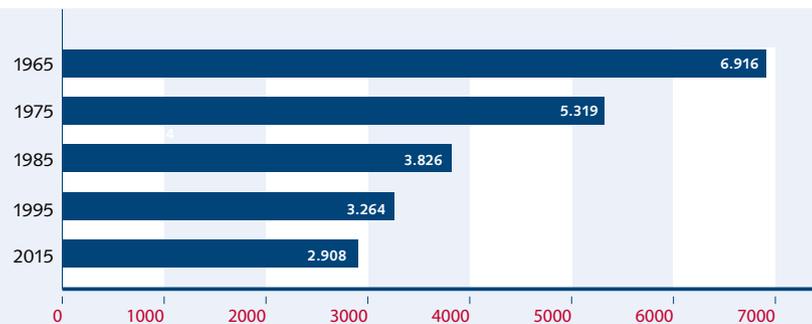


For illustration: 560 kWh correspond to

- ▶ less than the normal power consumption of a gaming computer with high-speed processor within a 9-months period at 4 hours daily operation (767 kWh/a),³⁾
- ▶ less than half the annual power consumption of an average household for standby operation of TV sets, PCs, kitchen equipment etc.

Incidentally, spam mails account for an annual energy demand of 33,000 million kWh worldwide. This corresponds to the energy use of 7 million households in Germany.

Energy consumption per ton of paper in kWh



The prejudice:

Paper production emissions
are harmful to the climate.



Manufacturing 200 kg paper – i.e. the average per capita consumption in Europe – gives rise to carbon dioxide (CO₂) emissions averaging 150 kg. This value corresponds to the CO₂ output of an average family car for 1,000 km.

The paper industry has continually lowered its specific CO₂ emissions.

It is not a climate threat.



When talking about the climate compatibility of products or processes, discussions are frequently centring round the CO₂ ballast, the so-called carbon footprint. This term is intended to illustrate the emissions of climate-affecting gases developing during manufacture of a product or in the course of a process. Accordingly, the production of a sheet of paper leaves a footprint just as does driving a car for shopping.

In accordance with research results published by the Royal Institute of Technology of Sweden, the carbon footprint for a specific volume of news is 20 percent lower if the news is read in a daily newspaper than if it is looked up on the internet. A single subscriber to a daily newspaper thus contributes CO₂ emissions in the order of 28 kg per year as against 35 kg CO₂ per year which result from using a computer for 30 minutes a day. And this comparison disregards the fact that a newspaper may be read by several users.

- ▶ PC users produce 200 g CO₂ for every 1,000 Google queries on the net,¹⁾
- ▶ a businessman using his email account causes an average 131 kg CO₂ per year, with spam mails alone making up 22 percent of this value.²⁾

Paper as a material is CO₂-neutral along its lifecycle. This is primarily due to the fact that forests as renewable resources stand at the beginning of the product chain. Woodlands are sinks storing at least the same amount of CO₂ as is finally released during incineration or composting of paper. It is noteworthy in this context that combustion of non-recyclable fibres helps to save fossil fuels.

By taking advantage of a sustainable forest management (see also the comment on Prejudice No. 1) the paper industry contributes toward reduced CO₂ emissions on an international scale.

4

The prejudice:

Paper consumption levels are excessively high – to the damage of natural resources.



Modern life would be largely inconceivable without paper. We read newspapers, journals and books; we expect that goods are safely packaged and we need paper for our daily hygiene. Everybody has to decide for himself whether he uses “too much” paper.

Actually, end users only come into contact with part of the paper consumption. We see neither the outer transport packages employed in trade and industry nor the files and printed matter of official authorities and commercial enterprises. It is a widely unknown fact that speciality papers find application in automotive engineering and for wine filtration just as for medical purposes.

4

The facts:

Paper stock circuits include high recycled shares.
The paper industry preserves natural resources thanks to recycling.

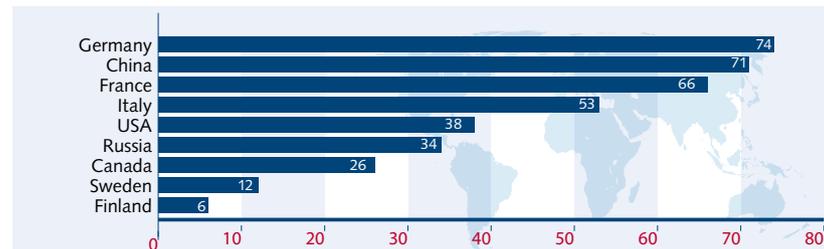


Actually, paper affords unbeatable advantages in that it is made from a renewable rather than a finite raw material. A sustainable resource management of wood, pulp, water and energy requirements warrants that paper production remains ecologically compatible to a very high degree.

Recycling largely contributes toward keeping the paper cycle sustainable. The re-use of consumed raw materials enables an overall decrease in the consumption levels of energy and wood fibres as well as in effluent treatment needs. To document this policy, some paper manufacturers apply the Blue Angel eco-label, a seal of quality certifying the special environmental friendliness of a product.

In the European Union, the paper for recycling utilisation rate – i.e. the percentage of paper for recycling utilisation compared to total new paper production – has reached a mark of over 60 percent and in Germany even of 74 percent. In other words, an average 74 kg paper for recycling goes into the production of 100 kg paper.

Paper for recycling utilisation rate by countries in percent



The paper industry uses
too little paper for recycling.



Limitless recycling - like the perpetual motion machine – will remain a dream. In actual fact, however, the paper industry is not too far off the mark. In Germany, 74 percent – that is some 15 million tonnes – of consumed paper are recovered, part of which is unsuitable for recycling. Overall, however, the paper industry uses an annual 16,6 million tonnes paper for recycling in the production of new papers. This corresponds to a paper for recycling utilisation rate of 74 %. Considering the broad product range available in Germany, this is at the top end of the scale, making Germany the world champion in the recycling sector.

In view of the machinery and equipment currently available in Germany and of the associated paper products, it appears the existing technological potential has largely been exploited. However, should future market developments boost the

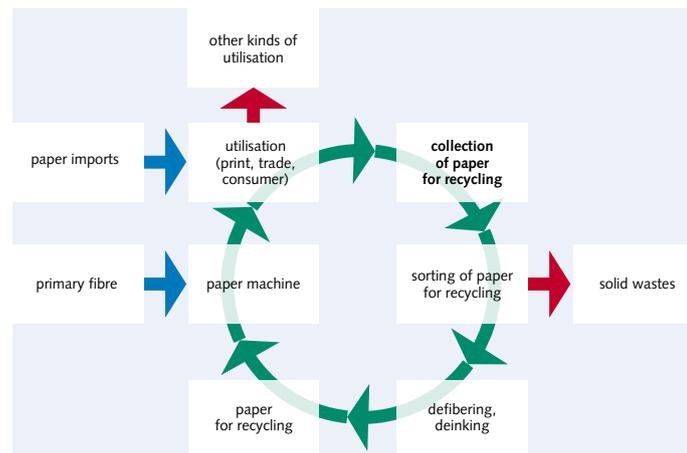
The facts:

The German paper industry is the leader in paper for recycling utilisation worldwide. Nevertheless – fresh fibre is still needed.

demand for recycled based papers, new production capacities will be established to enable a further increase in recycled contents.

To condition paper for recycling for new paper manufacture, a number of different cleaning steps and treatment processes are required. Since all these are accompanied by a degradation or loss of fibres, fresh fibre has to be added in order to maintain a continued paper cycle. Wood fibres in paper normally withstand up to six recycles.

In terms of quality, recycled papers do not have to fear the comparison with chemical or mechanical pulp papers. Generally speaking, there are quite a number of paper grades that cannot be partly or entirely produced from recycled fibre, because they have to meet stringent demands on tear strength or printability.



The paper industry is a no-future sector



The paper industry is a high-tech sector with a future. German paper mills produce some 3,000 different paper grades – all of them being customised to meet special requirements regarding finish and quality. At a total of approx. 160 production sites, the paper industry in Germany employs a staff of about 40,000 with an unchanging number of apprentices and trainees per year.

The German paper industry is No. 1 in Europe and No. 4 in the world. The sector undergoes dynamic growth.



Production is growing. 2015 22,6 million tons of paper and cardboard were produced in Germany: packaging board, printing papers, sanitary papers and a multitude of technical specialities ranging from banknote papers to filter and laminating grades. In terms of production, Germany is at the top in Europe and ranks fourth worldwide after the U.S., China and Japan.

Paper grades from Germany are also in international demand, with approx. 45 % of overall production going into exports. In many areas German paper companies are players in the 1st league or even world market leaders for their products. By international standards, the German paper industry is equipped with leading-edge machinery so that it is armed for the future.

The paper industry offers training positions for the following jobs, to mention just a few:



Paper engineers

Paper engineers are versatile experts in their field. Besides the production of paper and board and of chemical and mechanical pulp, they are specialised in paper for recycling treatment. Their focus is on production, research and development (R&D) and on all levels of management. Study courses in paper engineering are available at universities of technology in Germany and Austria.

Paper technologists

A broad spectrum of activities opens up to paper technologists in the paper industry. Their scope of responsibilities encompasses the treatment of raw materials and auxiliaries in addition to paper, board and pulp production, the setting, feeding, operation, monitoring and maintenance of plant and machinery for paper and pulp sheet forming, the controlling of operational procedures from control centres, the supervision of production operations and, finally, quality checks of end products. Dedicated training positions are offered by many paper mills in Germany, Austria and Switzerland.

7

The prejudice:

Online media replace printed paper



Online information is on the increase, but without challenging the existence of printed paper. Providing different benefits, both media satisfy user needs. Electronic media excel by the speed of dissemination of information, whereas print attracts consumers by its elaborate production and optical appearance, its ease of handling and user friendliness or simply by the pleasure of reading it provides.

Print media are the prototypes of wireless communication: long before iPad & Co. entered the scene, print media could be carried around to any place. Advanced print processes or the print on demand option help to meet user expectations better than before. In many cases, the two media form a symbiosis. Newspapers and magazines provide online services, and online offerings are solicited on a cross media basis in brochures and flyers or they appear as an additional informa-

7

The facts:

In advertising, print media lead the field by a clear margin before the internet. Print and online media are supplementary.

tion source in the form of quick response codes in newspapers. Renowned online enterprises such as Google and Ebay, too, rely on print media in their advertising campaigns for internet platforms and offerings.

Advertising is considered an important place of trade for the dissemination of information. With a market share of 10.7 %, the internet clearly lags behind newspapers and magazines which together hold 35 percent of the advertising pie.

In our third millennium, print products including paper – though repeatedly declared dead – still occupy a significant rank among the vital necessities of mankind. The subject 'paperless office' – a popular theme at the onset of the new media era – has long been dropped and so has the prognostication of a quick replacement of paper by flexible displays as information carriers in playbill advertising and mobile communication equipment.

The paper industry, too, goes online whenever this appears reasonable. For the basic arguments regarding "Prejudices and the facts" visit us on the net at www.vorurteilundwahrheit.de. Here instructions are given how to download the contents as App to your smartphone.

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Invented 1900 years ago, paper is nowadays inseparably linked to everyday life. It serves modern society as a print medium for information and knowledge transfer, as wrapping and packaging material, for daily hygiene or as a speciality product lending itself to a multitude of applications ranging from banknotes to medical filters. Like every kind of production, paper manufacturing is a consumer of resources. Compared with other materials, however, paper offers high ecological benefits. It is made from wood as a renewable raw material and stands for an exemplary recycling management. Regarding the ecological aspects of paper, there are a number of prejudices and untrue allegations which we would like to address in this brochure.



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